WHAT IS CLAIMED IS:

1. A method for preserving donated blood, said method comprising delivering a preservation effective amount of electromagnetic energy to donated blood, the electromagnetic energy having a wavelength in the visible to near-infrared wavelength range.

2. A method in accordance with Claim 1 wherein delivering the effective amount of electromagnetic energy comprises selecting a predetermined power density of energy to deliver to the blood of at least about 0.01 mW/cm^2.

3. A method in accordance with Claim 2 wherein the predetermined power density is selected from the range of about 1 mW/cm^2 to about 100 mW/cm^2.

4. A method in accordance with Claim 1 wherein the electromagnetic energy has a wavelength of about 630 nm to about 904 nm.

5. A method in accordance with Claim 4 wherein the electromagnetic energy has a wavelength of about 810 nm to about 830 nm.

6. A method in accordance with Claim 4 wherein the electromagnetic energy has a wavelength of about 670 nm to about 690 nm.

7. A method in accordance with Claim 1 wherein delivering the electromagnetic energy comprises delivering the electromagnetic energy to the blood in a hypothermic environment.

8. A method in accordance with Claim 7 wherein the blood is placed into a container prior to delivering the energy.

9. A method in accordance with Claim 7, wherein the container is a transparent or translucent bag which allows for the passage of the electromagnetic energy.

10. A method in accordance with Claim 1 further comprising providing for physiologic gas-exchange for the blood and delivering the electromagnetic energy to the blood in a normothermic environment.

11. A method for treating extracorporeal blood, comprising:

delivering to at least a portion of cellular components of extracorporeal blood electromagnetic energy in a quantity sufficient to prevent or retard damage to cellular components of the blood, said electromagnetic energy having a wavelength of about 630 nm to about 904 nm.

12. A method in accordance with Claim 11 wherein the electromagnetic energy has a power density of at least about 0.01 mW/cm^2.

13. A method in accordance with Claim 13 wherein the power density is selected from the range of about 1 mW/cm^2 to about 100 mW/cm^2.

14. A method in accordance with Claim 11 wherein the electromagnetic energy has a wavelength of about 630 nm to about 904 nm.

15. A method in accordance with Claim 14 wherein the electromagnetic energy has a wavelength of about 810 nm to about 830 nm.

16. A method in accordance with Claim 14 wherein the electromagnetic energy has a wavelength of about 670 nm to about 690 nm.

17. A method in accordance with Claim 11 wherein during treatment the blood resides in a container having a hypothermic environment.

18. A method in accordance with Claim 17, wherein the container is a transparent or translucent bag which allows for the passage of the electromagnetic energy.

19. A method in accordance with Claim 11, wherein the electromagnetic energy is pulsed during treatment.

20. A method for treating extracorporeal blood, comprising:

delivering to at least a portion of cellular components of extracorporeal blood electromagnetic energy having a wavelength of about 670 nm to about 690 nm and/or about 810 nm to about 830 nm and a power density of at least about 0.01 mW/cm^2

wherein the electromagnetic energy is sufficient to increase the useable shelf life of treated blood as compared to untreated blood.